

APPENDIX A

LOCAL NATIONAL WEATHER SERVICE (NWS) OFFICE PRODUCTS

A.1. Hurricane/Typhoon Local Statements (HLS). WFOs with coastal county responsibilities *and selected inland WFOs* will issue these unnumbered products which are very specific and designed to inform media, local decision makers, and the public on present and anticipated storm effects in their county warning area (CWA) and adjacent coastal waters. Keep HLSs as succinct as possible.

A.1.1. Mission Connection. Alert the public, media, and local decision makers of potential or actual storm affects due to tropical cyclones. The product is intended to provide information to assist in the preparation and implementation of necessary precautions for the protection of life and property, as well as minimize the economic losses as a result of tropical cyclones.

A.1.2. Issuance Guidelines.

A.1.2.1. Creation Software. AWIPS.

A.1.2.2. Issuance Criteria. *The following WFOs will issue HLSs when their area of responsibility is affected by a tropical cyclone watch/warning or evacuation orders. HLSs may also be issued as needed to dispel rumors or to clarify tropical cyclone related information for their CWA. Coastal WFOs have the option to include inland counties in the HLS.*

Coastal WFOs are defined as those having at least one county with significant tidal influences. Those are:

Eastern Region

Caribou, ME
Portland, ME
Boston, MA
New York City, NY
Philadelphia, PA
Baltimore, MD/Washington, DC
Wakefield, VA
Newport/Morehead City, NC
Wilmington, NC
Charleston, SC

Southern Region

Brownsville, TX
Corpus Christi, TX
Houston/Galveston, TX
Lake Charles, LA
New Orleans, LA
Mobile, AL
Tallahassee, FL
Tampa Bay, FL
Miami, FL
Key West, FL
Melbourne, FL
Jacksonville, FL
San Juan, PR

Western Region

San Diego, CA
Los Angeles/Oxnard, CA

Pacific Region

Honolulu, HI
Guam
WSO Pago Pago, American Samoa

Inland WFOs listed below will also issue HLSs when hurricane or tropical storm force winds are expected to impact their area of responsibility. Inland offices not issuing HLSs but expecting hurricane or tropical storm force winds may be required to issue an Inland Tropical Storm/Hurricane Wind Watches or Warnings.

| | |
|-------------------------------|-----------------------|
| <i>Atlanta, GA</i> | <i>Jackson, MS</i> |
| <i>Birmingham, AL</i> | <i>Huntsville, AL</i> |
| <i>Austin/San Antonio, TX</i> | <i>Midland, TX</i> |
| <i>San Angelo, TX</i> | <i>Lubbock, TX</i> |
| <i>Fort Worth, TX</i> | |

A.1.2.3. Issuance Times. *The initial HLS should be issued as soon as possible following the first issuance of a tropical storm/hurricane watch/warning for your area of responsibility. When a tropical storm or hurricane is close to the coast, issue HLSs every 2 to 3 hours or more frequently as circumstances warrant. Do not release HLSs immediately before an advisory unless information is coordinated with the appropriate Tropical Cyclone Center and, for watches or warnings, the valid initiation time is specified. HLSs do not need to immediately follow the issuance of a new hurricane advisory. Issuing HLSs midway between advisories maintains a steady flow of information to the media and the public. However, when local storm impacts are changing rapidly, or a new advisory changes the potential impact on a local area, information needs to be distributed in a fresh HLS as soon as possible. Routine HLSs may cease when the tropical cyclone is no longer a threat to an office's CWA.*

A.1.2.4. Valid Time. *HLSs are valid at the time of issuance until a subsequent HLS is issued. HLSs are issued at least once every 6 hours.*

A.1.2.5. Product Expiration Time. *Generally 6 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end.*

A.1.3. Technical Description. *HLSs will follow the format and content described in this section.*

A.1.3.1. UGC Type. *HLSs will use the zone (Z) form of the UGC.*

A.1.3.2. Mass News Disseminator (MND) Header. *The HLS MND header product type line is “(TROPICAL CYCLONE TYPE) LOCAL STATEMENT.”*

A1.3.3. Content. *HLSs will add localized details to Tropical Cyclone Center’s advisory releases and should not conflict with or repeat advisory information not directly applicable to the local office’s CWA. Before the first HLS, use public information statements (PNS) to inform the public on routine hurricane preparedness information. The first HLS can also contain standard preparedness messages. Information may be added to the end of the HLS describing where additional storm information can be found in supporting Center’s TCP and TCM as well as PNSs and NOWs (Short Term Forecast) issued by the local office.*

HLSs should use tropical cyclone position estimates provided by their tropical cyclone center between advisories when appropriate. When tropical cyclones threaten the Samoas (American Samoa and Samoa), the two local offices will coordinate with RSMC Nadi, CPHC, and with each other to determine the best integrated and internally consistent forecast of conditions expected in the area.

The following table defines which products are issued via the normal suite of product headers during tropical cyclone watches/warnings and those products superseded by tropical cyclone watches/warnings and carried in a HLS.

HLS Product Table

| Product | Tropical Cyclone Watch/Warning | |
|--|--------------------------------|----------------|
| | HLS | Stand-alone |
| Flash Flood Watch/Warning/Statement | | X |
| Flood Warning | | X |
| Tornado Warning | | X |
| Inland Tropical Storm Wind or Inland Hurricane Wind Watch/Warning | | X |
| Severe Thunderstorm Warning | | X ¹ |
| Coastal Flood Watch/Warning/Statement | X ² | X ² |
| Special Marine Warning | | X ³ |
| Severe Weather Statement | | X ¹ |
| Marine Weather Statement | | X ¹ |
| Special Weather Statement | X | |
| Surf Zone Forecast/Surf Forecast | X | |
| High Surf Advisory/Warning (WFO Honolulu) | X | |

¹ Can be issued as stand-alone products at the discretion of the WFO. However, their use should be confined to peripheral events, such as outer rainbands, prior to sustained tropical storm or hurricane strength winds

² If no CFW products were issued by the WFO prior to the issuance of a tropical cyclone watch or warning and an HLS is issued, no CFW products will be issued for the duration of the tropical cyclone event.

Complications occur when a CFW product is in effect and tropical cyclone watches and/or warnings are issued. The basic premise is if the threat level of a tropical cyclone product equals

or exceeds the threat level of an existing CFW, the CFW will be discontinued. Below are details.

- A CFW product is in effect for a Coastal Flood Warning and/or High Surf Warning and a tropical cyclone watch is issued - CFW will **continue** as standalone product along with HLS product.
- A CFW product is in effect for a Coastal Flood Warning and/or High Surf Warning and a tropical cyclone warning is issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.
- A CFW product is in effect for a Coastal Flood Advisory, Coastal Flood Watch, and/or High Surf Watch and a tropical cyclone watch or warning is issued - CFW will be **canceled** and users directed to the HLS for further information on coastal hazards.

| PRODUCTS IN EFFECT | CONTINUE CFW | CANCEL CFW | ISSUE HLS |
|--|---------------------|-------------------|------------------|
| <i>Coastal Flood ADVISORY (CFW) and Tropical Cyclone WATCH is issued</i> | | X | X |
| <i>Coastal Flood ADVISORY (CFW) and Tropical Cyclone WARNING is issued</i> | | X | X |
| <i>Coastal Flood WATCH (CFW) and Tropical Cyclone WATCH is issued</i> | | X | X |
| <i>Coastal Flood WATCH (CFW) and Tropical Cyclone WARNING is issued</i> | | X | X |
| <i>Coastal Flood WARNING (CFW) and Tropical Cyclone WATCH is issued</i> | X | | X |
| <i>Coastal Flood WARNING (CFW) and Tropical Cyclone WARNING is issued</i> | | X | X |
| <i>High Surf WATCH (CFW) and Tropical Cyclone WATCH is issued</i> | | X | X |
| <i>High Surf WATCH (CFW) and Tropical Cyclone WARNING is issued</i> | | X | X |
| <i>High Surf WARNING/ADVISORY (CFW) and Tropical Cyclone WATCH is issued</i> | X | | X |
| <i>High Surf WARNING (CFW) and Tropical Cyclone WARNING is issued</i> | | X | X |

³ WFOs have the option to issue stand-alone special marine warnings (SMWs) on an as needed basis. This will primarily occur during watch situations prior to the onset of tropical storm winds impacting a marine zone. In cases of waterspouts, SMWs may be issued anytime during tropical cyclone watch/warning situations.

A.1.3.4. Format. As appropriate, product header options are "Hurricane or Typhoon Local Statement," "Tropical Storm Local Statement" or "Tropical Depression Local

Statement. " All HLSs will contain at least one headline. Prepare each section of the HLS by a content/topic header set off by three dots before and after each header. Prioritize and adjust the order to focus on the greatest threat and the most important information impacting the area.

A.1.4 Essential contents of Hurricane Local Statements:

...Headline...

A minimum of at least one concise lead sentence or headline.

...Areas Affected...

Details of which counties, parishes, or cities are included in the HLS.

...Watches/Warnings...

Watches and warnings in effect and counties or parishes to which they apply.

...Storm Information...

Present location, movement, and winds and expected time of onset of tropical storm/hurricane/typhoon force winds. Give timing of impacts in ranges or general terms such as "afternoon," "evening," and so on. Use the tropical cyclone forecast/advisory as guidance.

...Precautionary/Preparedness Actions...

Short-term precautionary actions and times they should be completed. This includes any evacuation recommendations contained in the advisory or stated by local authorities. Listing these actions is particularly important once a tropical cyclone watch or warning is announced.

...Storm Surge Flood and Storm Tide Impacts...

Storm surge and storm tide (storm surge plus astronomical tide) information, including times, various heights are expected, present heights, and their locations. If data exists, a comparison of storm surge heights from previous tropical cyclones should be included. Storm surge information must agree with Tropical Cyclone Center forecasts as included in the advisories. Include storm tide information because local officials might not have access to tide tables. Reference storm tide forecasts to appropriate datums understood by local authorities. For many portions of the coast, this would be mean sea level although some areas use mean lower low water.

...Wind Impacts...

Present winds and expected time of onset of tropical storm or hurricane force winds. *WFOs may provide information about the local impacts of the expected winds.*

...Other Impacts...(Substitute appropriate header to reflect most important threat)

Any statements on potential tornado and flood/flash flood threats, rip currents, beach erosion, high wind warnings inland, etc. Headlines would read for example: "...Inland

Flooding Impacts...” or “...Tornado Impacts...”

...Probability of Hurricane/Tropical Storm Conditions...

Information on probability of hurricane/typhoon/tropical storm conditions is optional.

...New Information...

Specific new and vital information which you wish to bring to the attention of your users.

...Next Update...

Time of next or final statement.

Some private sector vendors are parsing and scrolling HLS information. Format consistency of some of the HLS information is required. WFOs should still arrange the sections as they see fit with the most important first. WFOs still retain the option to use whatever headline they wish in the “Other Impact” section. Any section (including the ones the private sector are using) can be omitted if it is not appropriate for a given situation. Below are the headlines and those section headlines which require consistent formatting, e.g. ellipses, carriage returns and the exact section headline wording.

...Headline(s)...

More than one headline allowed with no blank lines in between, each section headline beginning and ending with ellipses

...Precautionary/Preparedness Actions...

...Storm Surge Flood and Storm Tide Impacts...

...Wind Impacts...

For the Headlines section, the vendor’s software will key in on the singular blank line between the Time/Date line of the Mass News Dissemination Header and the three ellipses (...) at the beginning and ending of each headline. For the other three sections, the vendor’s software will key on a blank line, the headline as written above, and three ellipses (before and after).

EXAMPLE:

*HURRICANE LOCAL STATEMENT
NATIONAL WEATHER SERVICE XXXXX
1019 AM CDT TUE JUL 15 2003*

*...HURRICANE ZENIA MOVING ONTO THE MIDDLE TEXAS COAST
NEAR PORT O'CONNOR...
...A HURRICANE WARNING IS IN EFFECT FROM BAFFIN BAY TO HIGH
ISLAND...*

...PRECAUTIONARY/PREPAREDNESS ACTIONS...
TEXT

...STORM SURGE FLOOD AND STORM TIDE IMPACTS...
TEXT

...WIND IMPACTS...
TEXT

Wtaaii CCCC DDHHMM
HLSxxx
st ZXXX-XXX>XXX-DDHHMM-
(TROPICAL CYCLONE TYPE) LOCAL STATEMENT
NATIONAL WEATHER SERVICE CITY, STATE
time am/pm time_zone day mon DD YYYY

...HEADLINE...

...Areas Affected...

...Watches/Warnings...

...Storm Information...

...Precautionary/Preparedness Actions...

...Storm Surge Flood and Storm Tide Impacts...

...Wind Impacts...

...Other Impacts...(Substitute appropriate header to reflect most important threat)

...Probability of Hurricane/Tropical Storm Conditions...

...New Information...

...Next Update...

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Figure A-1. Hurricane Local Statement Format

A.1.5. Relationship of HLSs to the NOW. The NOW is a stand-alone product focused on conditions impacting the office’s CWA for the next 0 to 6 hours. It will complement the HLS by providing critical storm information in the first eight lines.

A.2. Tornado and Flash Flood Warnings (TOR/FFW). *WFOs should follow policy for the issuance of tornado warnings as per directive 10-511. However, for the 2005 season, the TOR product may be used for the purpose to warn the public to immediately take shelter in an interior portion of a well-built structure due to the onset of extreme tropical cyclone destructive winds.*

A tornado warning for extreme tropical cyclone destructive winds may be issued when all of the following criteria are met:

- *Imminent or occurring onset of tropical cyclone-related sustained winds, greater than or equal to 100 knots (115 mph).*
- *Onset of tropical cyclone-related destructive winds are expected to develop or occur within a WFOs county warning area within an hour.*

The warning valid time should be 2 hours or less using county UGCs.

A.3. Inland Tropical Storm/Hurricane Wind Watch or Warning (NPW). *Coastal and inland WFOs will issue an inland tropical storm watch or warning, or inland hurricane watch or warning, when a tropical cyclone is expected to spread tropical storm or hurricane force winds inland under the non-precipitation weather product NPW. The NPW will be exclusively used for this product’s initial issuance, subsequent follow-up, and cancellation. The following WFOs are exempt from this policy and will issue NPWs for high wind watches and/or warnings if tropical storm winds move into their area of responsibility.*

| | |
|-----------------------|--------------------------|
| <i>Albany, NY</i> | <i>Cleveland, OH</i> |
| <i>Binghamton, NY</i> | <i>Pittsburgh, PA</i> |
| <i>Buffalo, NY</i> | <i>State College, PA</i> |
| <i>Burlington, VT</i> | <i>Wilmington, OH</i> |
| <i>Charleston, WV</i> | |

A.3.1. Mission Connection. Non-precipitation watches and warnings provide our customers and partners advance notice of hazardous non-precipitation weather events which have the potential to threaten life and property.

A.3.2. Issuance Guidelines.

A.3.2.1. Creation Software. Use AWIPS Watch/Warning/Advisory software or other text editors.

A.3.2.2. Issuance Criteria. WFOs will issue Inland Tropical Storm/Hurricane Watches when tropical storm/hurricane force winds are possible within the watch area within 36 hours. WFOs will issue Inland Tropical Storm/Hurricane Warnings when tropical storm/hurricane force winds are expected within the warning area within 24 hours. For those offices issuing the inland watch/warnings, the NPW product will be updated as conditions warrant. At a minimum this should be every six hours or after the issuance of a six hourly NHC TCP advisory.

A.3.2.3. Issuance Times. Event driven.

A.3.2.4. Valid Time. Watch is valid up to 48 hours after the issuance time. The valid time (event start and end times) is described in the watch headline. A warning is valid up to 36 hours after issuance time. The valid time (event start and end times) is described in the warning headline.

A.3.2.5. Product Expiration Time. Generally 6-8 hours after the issuance time and should coincide with the next expected update or when the event is forecast to end.

A.3.3. Technical Description. NPWs will follow the format and content described in this section.

A.3.3.1. UGC Type. NPWs will use the zone (Z) form of the UGC.

A.3.3.2. Mass News Disseminator Header. Not applicable.

A.3.3.3. Content. A headline will be "Inland Tropical Storm Watch (or Warning)" or "Inland Hurricane Watch (or Warning)." When the effects of the tropical cyclone can be clearly described to the public and not lead to confusion, inland sections of coastal counties may be placed under inland tropical storm/hurricane watch or warning versus using tropical cyclone watches or warnings. Coordination will occur with all impacted offices and NHC before issuance. The appropriate forecasts and statements will highlight watches and warnings.

A.3.3.4. Format.

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WWaaii CCCC DDHHMM
NPWxxx

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE CITY, STATE
time am/pm time_zone day mon DD YYYY

...<Overview headline statement>...

...<General non-precipitation weather synopsis>...

stZxxx-xxx>xxx-DDHHMM-
zone-zone-zone
INCLUDING THE CITIES OF...
time am/pm time_zone day mon dd yyyy

...HEADLINE...

TEXT

$$
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Figure A-2. Inland Wind NPW Product Format

A.4. Inland Tropical Storm/Hurricane Wind Watch or Warning for Subtropical Storms.

WFOs will issue an inland tropical storm wind watch or warning, or inland hurricane wind watch or warning when a subtropical storm is expected to spread tropical storm or hurricane force winds inland. *Use same procedures as noted in section A.3.*

A.5. Post-Tropical Cyclone Reports (PSH). All WFOs issuing HLSs will prepare post-storm reports. Inland offices issuing inland tropical storm/hurricane wind watches or warnings will also submit reports. *Other offices whose CWA's experienced wind gusts greater than 33 knots, flooding, tornadoes, damage, or casualties will also submit reports.*

A.5.1. Mission Connection. The PSH product is intended to provide the NHC, NWS Headquarters, the media, the public, and emergency management officials with a record of peak tropical cyclone conditions. This data is then used to formulate other post-event reports, news articles and historical records.

A.5.2. Issuance Guidelines.

A.5.2.1. Creation Software. AWIPS.

A.5.2.2. Issuance Criteria. If HLSs are issued, a PSH will be issued.

A.5.2.3. Issuance Times. Transmit the reports within 5 days following the transmission of the last HLS or inland tropical storm/hurricane wind watches or warnings addressed to the appropriate Tropical Cyclone Center or National Center and a copy to Weather Service Headquarters, W/OS21. Amend reports as needed.

A.5.2.4. Valid Times. Not applicable.

A.5.2.5. Product Expiration Time. Not applicable

A.5.3. Technical Description.

A.5.3.1. UGC Type. Not applicable.

A.5.3.2. Mass News Disseminator Header. The PSH header block product type line is “POST-TROPICAL CYCLONE REPORT...(TROPICAL CYCLONE TYPE).”

A.5.3.3. Content. Include the following items in the initial report and in any subsequent updated reports:

a. **Wind data:** If the observed peak gusts are greater than 33 knots, report highest sustained surface wind speed (knots) and duration (1-, 2- 8-, or 10-minute average which ever applies), peak gust (knots), and date/times of occurrence in UTC. Specify anemometer height (feet) if other than 33 feet. Report all NOAA, Department of Defense, and Federal Aviation Administration official observing sites in a NWS office’s CWA including ASOS sites, NOAA buoy/Coastal Marine Automated Network (C-MAN) stations, and National Ocean Service stations. Also report other reliable data collected by government sources or other institutions. These include reports from stations maintained by the U. S. Coast Guard; state, county, and local governments; universities; private companies; and experimental networks. List adjusted speeds corrected for instrument type and speed range if known. Data reports from the public are optional. However, NWS offices should encourage these data and include them in the PSH when considered reliable.

b. **Pressure data:** Report lowest sea level pressure (millibars), and date/time of occurrence (UTC). Report data from all sources given in Section a, and other stations where significant pressure observations are available. Report pressures less than 1005 mb, with pressure greater than 1005 mb reported as needed or as requested by the NHC.

c. Storm total rainfall: Report amount (inches) and duration (dates). In addition, list maximum 1-, 6-, 12-, and 24-hour amounts (inches) identifying date/time (UTC) of occurrence. Report data from all sources given in Section a, and other stations where significant rainfall observations are available. Report storm total rainfalls of 3 inches or more, with amounts under 3 inches reported as needed or as requested by the NHC.

d. Maximum storm tide heights: Reference storm tide to appropriate datums understood by local authorities. For many portions of the coast, this would be National Geodetic Vertical Datum although some areas use mean lower low water. Report storm tide in feet above the datum, and storm surge/wind waves in feet above the normal, predicted (astronomical) tide level. Identify location and date/time (UTC) of occurrence where possible. Report tides of 1 foot or greater above normal, with tides of less than 1 foot above normal reported as needed or as requested by the NHC.

e. Extent of beach erosion: As appropriate.

f. Flooding and/or flash flooding in CWA: Report to include date/times (UTC) and locations of occurrence.

g. Tornadoes in CWA: Report (times and locations).

h. Storm effects: Such as deaths, injuries, dollar damages, number of people evacuated, etc., within an office's CWA.

A.5.3.4. Format.

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Ataa2i CCCC DDHHMM
PSHxxx

POST TROPICAL CYCLONE REPORT...(TROPICAL CYCLONE TYPE)
NATIONAL WEATHER SERVICE CITY STATE
time am/pm time_zone day mon DD YYYY

Wind data

Pressure data

Storm total rainfall

Maximum storm tide heights

Extent of beach erosion

Flooding and/or flash flooding in CWA

Tornadoes in CWA

Storm effects
$$
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Figure A-3. Post-Tropical Cyclone Report Format

A.6. Information for Service Assessments. WFOs will forward a copy of media reports, especially newspaper clippings (online and printed) representative of the event and its impacts. Send reports to the appropriate RH and TPC within 7 days following the issuance of the last product concerning the storm. Reports do not have to include all interviews or radio or television spots concerning the landfall event in each local office's CWA.

A.7 Local Storm Reports (LSR). *WFOs will prepare these reports in accordance with LSR instructions (reference NWS Instruction 10-517, available at <http://nws.noaa.gov/directives>).*

A.8. Storm Reports. *WFOs will prepare these reports in accordance with Storm Data Preparation instruction (Reference NWS Instruction 10-1605).*

A.9. Correction Procedures. Tropical cyclone centers and WFOs should correct products using the following format:

WTNT KNHC 161441 CCA
TCDAT1

TROPICAL STORM ARTHUR DISCUSSION NUMBER 8...CORRECTED
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL
11 AM EDT TUE JULY 16 2002

CORRECTED FOR (GIVE REASON)

TEXT FOLLOWS....

CCA - If a second correction is necessary, the "A" becomes a "B" (CCB).
"CORRECTED FOR" is optional but encouraged.

A.9. Procedures for Populating WFO-Generated Wind Forecast Grids for Tropical Cyclone Events. *The following are short-term solutions to be followed by all impacted WFOs for populating WFO wind grids for tropical cyclones. Updates to this directive will take place as better methods for populating WFO-generated wind forecasts are integrated into the Interactive Forecast Preparation System.*

A.9.1. Wind Speed Values Within the 34 kt Wind Radii

0-24 hours

Use wind forecast from the TCM as guidance for locating the 34-, 50- and 64-kt wind radii to maintain synoptic consistency. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of values up to the maximum sustained wind value provided by tropical cyclone centers.

25-72 hours

Use wind forecast from the TCM as guidance for locating the 34-, 50- and 64-kt wind radii to maintain synoptic consistency. Extrapolate the 64-kt radii from the 36-hour model guidance (TCMWind tool will do this). Coordinate consensus with NHC and adjacent WFOs. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 100 knots or up to the maximum sustained wind forecast by the NHC if it is less than 100 knots. For 101 kts and above use the capped value of 100 kts for grid points inside the 64 kt wind radii.

73-120 hours

Use forecast from the TCM as guidance for locating the center positions to maintain synoptic consistency. Extrapolate the 64-kt radii, the 50-kt radii and the 34-kt from model guidance (TCMWind tool will do this). Coordinate consensus with NHC and adjacent WFOs. Apply local knowledge and mesoscale expertise to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 64 knots or up to the maximum sustained wind forecast by the NHC if it is less than 64 knots. For 65 kts and above use the capped value of 64 kts for grid points inside the 64 kt wind radii.

121-168 hours

Use traditional guidance and WFO discretion to produce explicit/deterministic wind speed forecasts for all CWA/MAR grids using a full continuum of wind speeds up to 30 kts. The choice for 30 kts avoids potential confusion which can result from the automated rounding of 33 kts to 35 kts when generating graphical wind barbs, and with associated textual formatters which convert kts to miles per hour (then round to the nearest 5 mph).

A.9.2. Wind Speed Values Outside the 34 kt Wind Radii**0-120 hours**

Use deterministic wind speed values.

A.9.3. Wind Direction Values Inside or Outside the 34 kt Wind Radii**0-168 hours**

Use deterministic wind direction values.

A.9.4. Wind Gust Values Inside or Outside the 34 kt Wind Radii. At this time, there is no requirement to produce a gust grids. As an option, if a WFO desires to produce a gust grid it will have to be created with little or no guidance.

A.9.5. Caveat. It is highly recommended the following caveat be placed on all text and graphical products... “Winds in and near tropical cyclones should be used with caution due to uncertainty in forecast track, size, and intensity.”

A.10. Product Examples.

EXAMPLE: HURRICANE LOCAL STATEMENT

WTUS84 KCRP 151519
HLSCR
TXZ230>234-241>247-151815-

HURRICANE LOCAL STATEMENT
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
1019 AM CDT TUE JUL 15 2003

...HURRICANE CLAUDETTE MOVING ONTO THE MIDDLE TEXAS COAST
NEAR PORT O'CONNOR...

...A HURRICANE WARNING IS IN EFFECT FROM BAFFIN BAY TO HIGH
ISLAND...

...AREAS AFFECTED...

THIS STATEMENT RECOMMENDS ACTIONS TO BE TAKEN BY RESIDENTS IN
THE FOLLOWING COUNTIES OF ARANSAS...CALHOUN...KLEBERG...NUECES...
REFUGIO...SAN PATRICIO...BEE...GOLIAD...LIVE OAK...MCMULLEN...JIM
WELLS AND VICTORIA.

...WATCHES/WARNINGS...

A HURRICANE WARNING IS IN EFFECT FOR THE TEXAS COAST FROM BAFFIN
BAY TO HIGH ISLAND. AN INLAND TROPICAL STORM WIND WARNING IS IN
EFFECT FOR BEE...GOLIAD...LIVE OAK...JIM WELLS...MCMULLEN AND
VICTORIA COUNTIES FOR TODAY. AN INLAND TROPICAL STORM WIND
WATCH IS IN EFFECT FOR DUVAL AND LASALLE COUNTIES FOR TONIGHT. A
FLASH FLOOD WATCH IS IN EFFECT FOR TODAY FOR THE COUNTIES OF
ARANSAS...BEE...CALHOUN...GOLIAD...LIVE OAK...MCMULLEN...REFUGIO...
SAN PATRICIO AND VICTORIA.

...STORM INFORMATION...

AT 9 AM CDT...THE CENTER OF HURRICANE CLAUDETTE WAS LOCATED NEAR
LATITUDE 28.5 NORTH AND LONGITUDE 96.1 WEST...OR APPROXIMATELY 20
MILES EAST OF PORT O'CONNOR. MAXIMUM SUSTAINED WINDS ARE NEAR 80
MPH WITH HIGHER GUSTS. CLAUDETTE IS MOVING WEST-NORTHWEST NEAR
10 MPH. A CONTINUED MOVEMENT TOWARDS THE WEST-NORTHWEST IS
EXPECTED TODAY. GIVEN THIS FORECAST TRACK...THE EYE OF CLAUDETTE
IS EXPECTED TO MOVE ACROSS THE PORT OCONNOR TO PALACIOS AREA
AROUND 11 AM. WEAKENING IS EXPECTED AFTER THE EYE OF CLAUDETTE
MOVES INLAND.

...PRECAUTIONARY/PREPAREDNESS ACTIONS...

AS OF 1130 PM MONDAY EVENING...EMERGENCY MANAGEMENT OFFICIALS RECOMMENDED EVACUATIONS OF RESIDENTS OF ARANSAS COUNTY. ALSO...EVACUATIONS HAVE BEEN RECOMMENDED FOR RESIDENTS AND NON-RESIDENTS OF PORT ARANSAS. NO OTHER EVACUATIONS HAVE BEEN REPORTED TO THE NATIONAL WEATHER SERVICE AT THIS TIME. RESIDENTS OF SOUTH TEXAS...ESPECIALLY THOSE WHO LIVE IN THE COASTAL COUNTIES FROM KLEBERG TO CALHOUN...SHOULD COMPLETE ALL NECESSARY ACTIONS TO PROTECT LIFE AND PROPERTY.

...STORM SURGE *FLOOD* AND *STORM* TIDE IMPACTS...

AT 9 AM CDT...TIDES WERE APPROXIMATELY 3.5 FEET ABOVE MEAN SEA LEVEL AT BOBHALL PIER...AND 2.5 FEET ABOVE MEAN SEA LEVEL AT PORT OCONNOR. AS CLAUDETTE MOVES ACROSS THE COASTLINE...TIDES WILL CONTINUE TO INCREASE...ESPECIALLY FROM ROCKPORT NORTHWARD.

TIDES ARE EXPECTED TO RISE TO BETWEEN 3 AND 4 FEET ABOVE MEAN SEA LEVEL SOUTH OF ROCKPORT...AND 5 TO 6 FEET ABOVE MEAN SEA LEVEL BETWEEN ROCKPORT AND PORT OCONNOR BY THIS AFTERNOON.

AT 5 FEET MSL...WATER WILL FLOOD MANY STREETS IN LAMAR...ROCKPORT...INGLESIDE...FULTON...ARANSAS PASS...PORT ARANSAS AND PORT OCONNOR. WATER WILL REACH 1/4 MILE INLAND TO THE SOUTHERN PART OF ROCKPORT. PORTIONS OF HIGHWAY 35 BETWEEN ARANSAS PASS AND ROCKPORT WILL BE UNDER 1 FOOT OF WATER. ROADS WEST OUT OF ROCKPORT WILL BE UNDER WATER. BEACH AND HARBOR FACILITIES WILL BE FLOODED AT PORT ARANSAS. AT 4 FEET MSL...THE JFK CAUSEWAY WILL HAVE AROUND 1 FOOT OF WATER OVER IT. THE T-HEADS WILL BE FLOODED. FLOODING IS LIKELY ALONG HIGHWAY 35 FROM ARANSAS PASS TO ROCKPORT. SOME FLOODING IS LIKELY ALONG WATERFRONT FACILITIES AND ROADS THAT ARE NEAR THE WATER ALONG MANY COASTAL COMMUNITIES.

AT 3 FEET MSL...BEACH ROADS WILL BE FLOODED ON PADRE AND MUSTANG ISLANDS. THE JFK CAUSEWAY WILL HAVE SOME WATER OVER IT BUT NOT ENOUGH TO CLOSE IT DOWN. HIGH TIDES AT PORT ARANSAS OCCURRED AT 745 AM THIS MORNING AND WILL OCCUR AGAIN AT 817 AM ON WEDNESDAY. HIGH TIDES AT PORT OCONNOR WILL BE AT 259 PM THIS AFTERNOON AND 400 PM ON WEDNESDAY.

...WIND IMPACTS...

AT 9 AM CDT...THE COAST GUARD REPORTED WINDS OF 30 TO 40 KNOTS FROM THE NORTHWEST AT PORT O'CONNOR. A MESONET SITE IN PORT

OCONNOR REPORTED A WIND GUST AT 75 MPH AT 940 AM. WINDS ACROSS THE COASTAL WATERS FROM PORT O'CONNOR AND OUT TO 60 NAUTICAL MILES EAST OF PORT OCONNOR...HAVE INCREASED TO HURRICANE FORCE THIS MORNING.

WINDS OVER INLAND LOCATIONS FROM ROCKPORT TO VICTORIA ARE NORTH-NORTHWEST AROUND 25 TO 35 MPH. AS CLAUDETTE CONTINUES TO MOVE INLAND...WINDS WILL GRADUALLY INCREASE ACROSS THE ENTIRE AREA FROM EAST TO WEST.

TROPICAL STORM FORCE WINDS ARE EXPECTED TO SPREAD ACROSS THE REMAINDER OF THE COASTAL WATERS...PRIMARILY EAST OF PORT ARANSAS...THIS MORNING. WINDS GUSTING TO HURRICANE FORCE WILL MOVE INTO REFUGIO AND ARANSAS COUNTIES AROUND 11 AM CDT. THE TROPICAL STORM FORCE WINDS WILL ADVANCE SOUTHWEST DOWN THE COAST WITH TROPICAL STORM FORCE WINDS ENTERING THE COASTAL BEND NEAR CORPUS CHRISTI AROUND NOON. WIND GUSTS TO HURRICANE FORCE COULD OCCUR THIS AFTERNOON AND EVENING NEAR CORPUS CHRISTI AND REDFISH BAYS AND THE ADJACENT LAND AREAS.

...SEAS AND RIP CURRENTS...

AT 9 AM CDT...SEAS WERE AVERAGING AROUND 8 TO 10 FEET OUT TO AROUND 20 NAUTICAL MILES...14 TO 18 FEET BEYOND 20 NAUTICAL MILES. AS CLAUDETTE MAKES LANDFALL...SEAS WILL INCREASE TO 12 TO 17 FEET OUT TO 20 NAUTICAL MILES...15 TO 20 FEET BEYOND 20 NAUTICAL MILES OFFSHORE THIS MORNING. THESE LARGE SEAS WILL CONTINUE TO PRODUCE VERY ROUGH SURF AND DANGEROUS RIP CURRENTS ACROSS ALL OF THE SOUTH TEXAS BEACHES. ENTERING THE SURF IS STRONGLY DISCOURAGED THROUGH AT LEAST WEDNESDAY.

...FLOOD IMPACTS...

HEAVY RAINFALL WILL ACCOMPANY CLAUDETTE LATER THIS MORNING INTO THIS EVENING. THE GREATEST POTENTIAL FOR HEAVY RAIN SHOULD BE THIS AFTERNOON THROUGH WEDNESDAY. TOTAL RAINFALL AMOUNTS OF 5 TO 8 INCHES WILL BE POSSIBLE MAINLY TO THE NORTH OF A ROCKPORT TO ENCINAL LINE...WITH 2 TO 4 INCHES POSSIBLE TO THE SOUTH OF THIS LINE. THESE RAINFALL AMOUNTS MAY NEED TO BE REVISED IF THE FORECAST TRACK CHANGES. THIS AMOUNT OF RAINFALL WILL HAVE THE POTENTIAL TO PRODUCE FLOODING OVER THE NORTHERN PORTIONS OF THE COASTAL BEND AND RIO GRANDE PLAINS AREA.

...NEXT UPDATE...

THE NEXT SCHEDULED STATEMENT WILL BE ISSUED AROUND 1 PM.
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EXAMPLE: SHORT TERM FORECAST (NOWcast)

FPUS71 KMOB 192130
NOWMOB

SHORT TERM FORECAST
NATIONAL WEATHER SERVICE MOBILE AL
430 PM CDT SAT AUG 19 1995

ALZ051>064-MSZ067-075-076-078-079-192330-

.NOW...

...HURRICANE GARY WILL MOVE ACROSS BALDWIN AND MOBILE COUNTIES BY 530 PM... SUSTAINED WINDS ABOVE 80 MPH WITH HIGHER GUSTS AND TORRENTIAL RAINFALL CAN BE EXPECTED AS THE RAIN BAND MOVES ACROSS. THE RAIN BAND SHOULD WEAKEN SLIGHTLY AS IT MOVES ACROSS CLARKE...WASHINGTON...AND GEORGE COUNTIES BY 6 PM. BUT PEOPLE IN THESE COUNTIES SHOULD EXPECT WIND GUSTS TO NEAR HURRICANE FORCE AND EXTREMELY HEAVY RAINFALL.

&&

SCATTERED AREAS OF MODERATE TO HEAVY RAINFALL WILL CONTINUE ACROSS SOUTHERN ALABAMA AND MISSISSIPPI THROUGH 6 PM. BANDS OF STRONG STORMS WILL MOVE NORTHWESTWARD ACROSS THE AREA. EAST WINDS OF 30-40 MPH AND HEAVY RAIN WILL PERSIST WITH STRONGER WINDS AND HEAVIER RAINFALL NEAR THE RAIN BANDS. TEMPERATURES ACROSS THE REGION WILL REMAIN IN THE 70S.

EXAMPLE: INLAND HURRICANE WARNING

WWUS45 KHGX 101030
NPWHOU

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE HOUSTON-GALVESTON TX
600 AM CDT FRI SEP 10 1995

...AN INLAND HURRICANE WARNING IN EFFECT FOR SOUTHEAST TEXAS...

HURRICANE FRED...LOCATED 60 MILES SOUTHEAST OF GALVESTON TX AT 6 AM CDT...IS MOVING TO THE NORTH NORTHWEST AT 10 MPH AND IS EXPECTED TO MAKE LANDFALL AROUND NOON CDT ON THE UPPER TEXAS COAST. FRED IS THEN FORECAST TO CONTINUE ON A NORTH NORTHWEST

COURSE MOVING ACROSS HOUSTON AND REACHING THE SAN JACINTO NATIONAL FOREST BY LATE AFTERNOON. SUSTAINED WINDS OF 100 MPH WITH GUSTS TO 120 MPH SHOULD BEGIN SWEEPING ACROSS THE UPPER TEXAS COAST BY LATE MORNING.

TXZ177>179-197>199-210>212-102200-
WALKER-SAN JACINTO-POLK-WASHINGTON-GRIMES-MONTGOMERY-
COLORADO-AUSTIN-WALLER-

...INLAND HURRICANE WARNING...

WINDS ARE EXPECTED TO RAPIDLY INCREASE TO 50 TO 60 MPH BY 12 NOON AND 80 MPH WITH GUSTS TO 100 MPH BY MID AFTERNOON. 75 MPH WINDS WITH HIGHER GUSTS ARE LIKELY AS FAR INLAND AS HUNTSVILLE...NAVASOTA...AND LAKE LIVINGSTON BY LATE AFTERNOON.

BE PREPARED FOR NUMEROUS DOWNED TREES AND WIRES. DO NOT CROSS DOWNED WIRES...WHICH MAY STILL BE LIVE.

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TXZ226-227-235-213-200-102200-
WHARTON-FORT BEND-JACKSON-HARRIS-LIBERTY-

...INLAND HURRICANE WARNING...

WINDS FROM WHARTON TO HOUSTON AND LIBERTY ARE EXPECTED TO INCREASE TO 50 TO 60 MPH THIS MORNING AND 90 MPH WITH GUSTS TO NEAR 110 MPH BY MIDDAY...DECREASING TO 50 TO 60 MPH LATE THIS AFTERNOON.

FLYING DEBRIS WILL POSE A MAJOR THREAT TO ALL STRUCTURES IN THE WARNED AREA...ESPECIALLY GLASS FROM HIGH-RISE BUILDINGS IN DOWNTOWN HOUSTON. PEOPLE LIVING IN MOBILE HOMES AND THOSE CONCERNED ABOUT THE ABILITY OF THEIR HOMES TO WITHSTAND HURRICANE WINDS SHOULD MOVE TO A STRONG BUILDING OR SHELTER IMMEDIATELY. BE PREPARED FOR NUMEROUS DOWNED TREES AND WIRES. TAKE SHELTER IN SMALL INTERIOR ROOMS OR REINFORCED STRUCTURES.

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EXAMPLE: POST-TROPICAL CYCLONE REPORT

ACUS71 KNEW 032226
PSHNEW

POST-TROPICAL CYCLONE REPORT
NATIONAL WEATHER SERVICE NEW ORLEANS LA
500 PM CDT MON SEP 3 1992

A. HIGHEST WINDS...

NEW ORLEANS INTERNATIONAL AIRPORT...
1 - MINUTE 39 KNOTS FROM 150 DEGREES 0950 UTC AUG 26 1992
PEAK GUST 72 KNOTS FROM 020 DEGREES AT 0728 UTC AUG 26 1992
P92 AMOS LOCATED AT SALT POINT, ST. MARY PARISH 19.5N 91.3W
...ETC

B. LOWEST PRESSURE...

LOWEST PRESSURE NEW ORLEANS INTERNATIONAL AIRPORT - 960.1 MB AT
0805 UTC AUG 26 1992
...ETC

C. RAINFALL...

NEW ORLEANS INTERNATIONAL AIRPORT
STORM TOTAL 5.70 IN. AUG 25-26 1992
1 HOUR TOTAL 0.89 IN. 0800-0900 UTC 26 AUG 1992
...ETC

D. STORM TIDES...

MARINA 4.28 2100 UTC AUG 26 1992
N END OF CAUSEWAY 4.94 1100 UTC AUG 26 1992
...ETC

E. BEACH EROSION...

LEVEL OF EROSION PRESENTLY UNKNOWN
...ETC

F. FLOODING...

STORM TIDE FLOODING TO THE ENTIRE LOUISIANA COAST FROM LAKE BORGNE WEST TO VERMILION BAY...ETC

G. TORNADOES...

F3 TORNADO FROM LA PLACE TO RESERVE IN ST JOHN THE BAPTIST PARISH...ETC

H. STORM EFFECTS...

| | | | |
|-----------|--------|------------|-----------|
| TORNADO | 2 DEAD | 32 INJURED | |
| HURRICANE | 4 DEAD | UNKNOWN | 2 MISSING |

AN ESTIMATED ONE AND ONE QUARTER MILLION PEOPLE EVACUATED ACROSS SOUTHEAST AND SOUTH CENTRAL LOUISIANA...ETC